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**DEFENSE LOGISTICS**

**Integrated Plans and  
Improved  
Implementation Needed  
to Enhance  
Engineering Efforts**

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss the Department of Defense's (DOD) logistics reengineering initiatives and the actions we believe are needed to enhance the success of these initiatives. Logistics is an important and expensive function. The Department is using about \$84 billion of its \$280-billion budget this year for logistics support activities. Despite this expenditure, failing equipment and parts shortages continue to be a problem. At the same time, the Department would like to modernize its aging fleets of aircraft, ground combat vehicles, and ships, but does not have the funding it believes is necessary to accomplish this goal at the pace it believes is necessary. In recent years, a number of studies have stressed the need to improve the efficiency and effectiveness of the Department's logistics processes, systems, and infrastructure to provide improved support to combat forces and to achieve savings that can be used to modernize weapon systems. Accordingly, the Department is seeking to reengineer its logistics support through various initiatives.

As you requested, our testimony today focuses on (1) the Department's reengineering efforts, (2) the potential effect of the reengineering efforts on combat forces, and (3) the factors that could limit the achievement of reengineering goals. Information for this testimony is from a report we issued on June 23, 2000 dealing with the DOD reengineering initiatives.<sup>1</sup>

#### RESULTS IN BRIEF

The Department of Defense has taken steps towards reengineering its logistics processes. However, many aspects of the overall plan are incomplete, raising questions about whether or when the overall goals of improved service and lower costs will be achieved. Key steps the Department has taken include establishing 30 pilot programs to test various reengineering concepts and establishing a new office responsible for coordinating implementation of the reengineering effort and overseeing efforts to link hundreds of ongoing service-sponsored reengineering initiatives to the overall reengineering plans. However, DOD has not developed an overarching plan that integrates individual service efforts into a single Department-wide implementation strategy. Further, plans to test, evaluate, and fully implement reengineered support strategies Defense-wide by the end of 2005 face a number of challenges, making it unlikely that they will be able to provide key information in time to support interim decision-making deadlines. In some instances, pilot test plans have not been fully developed; in others, test results may be delayed. Additionally, because many of the 30 pilot programs have multiple objectives, it will be difficult to link results and savings to specific reengineering concepts. Finally, DOD has not estimated the total costs of completing logistics reengineering or developed a supporting budget plan. Without an investment strategy, there may not be sufficient funds to adequately test the reengineering concepts being piloted and to implement the results on a Department-wide basis.

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<sup>1</sup> See Defense Logistics: Actions Needed to Enhance Success of Reengineering Initiatives (GAO/NSIAD-00-89, June 23, 2000).

It is too early to assess the impact that reengineering logistics support will have on combat forces. Officials representing combat forces have brought up a number of concerns, including the effects of having large numbers of private contractors on or near the battlefield, the ability of contractors to meet the surge requirements, the effects of contracting on the number of positions available to military personnel returning to the United States from overseas assignments or at-sea deployments, and the loss of funding flexibility. The Department is in the early phases of developing its Joint Logistics Warfighter Initiative test, which may be useful in assessing the impacts of various logistics reengineering efforts on combat forces in an operational environment. However, the test is scheduled to take place before the reengineering initiatives are fully implemented, and its usefulness in assessing the impact of the reengineering concepts on combat forces will therefore be very limited. Consequently, its usefulness in supporting planned decisions at the end of fiscal year 2002 to expand the use of new logistics concepts DOD-wide is questionable.

Several factors, if not addressed, could limit the Department's ability to achieve its reengineering goals of improved service and lower costs. These include the impact that use of sole-source, long-term contracts would have on anticipated reengineering savings and the effects that existing laws and policies would have on the implementation of reengineering initiatives.

In our current report on this subject, we make recommendations to improve the planning and implementation of the logistics reengineering effort. More specifically, we recommend that the Department develop an overarching plan to integrate the reengineering efforts of all the components, reassess the schedule for various initiatives, develop a methodology for evaluating savings, and reevaluate the approach for assessing the use of increased numbers of contractors on the battlefield. The Department generally agreed with our report and its recommendations.

#### BACKGROUND

The Department of Defense uses a combination of in-house military and civilian employees and contractors to provide the vast support operations that are required to keep military airplanes, ships, and ground vehicles operational for peacetime training and operations and ready to support contingency operations whenever and wherever they occur. A breakdown of the estimated fiscal year 2000 logistics system personnel and costs is presented below.

**Table 1: Estimated Fiscal Year 2000 Logistics System Personnel and Costs**  
 (dollars in billions)

Function	Personnel <sup>a</sup>	Costs <sup>b</sup>
Depot maintenance	61,987	\$5.9
Other national-level maintenance <sup>c</sup>	13,378	3.9
Material management	39,068	19.1
Distribution and transportation	16,339	2.6
Operational <sup>d</sup> maintenance	403,320	16.7
Operational <sup>d</sup> supply	141,327	5.8
Operational <sup>d</sup> transportation	44,119	1.3
Other operational logistics <sup>e</sup>	158,298	6.0
Other product support <sup>f</sup>	3,744	0.2
Logistics support not related to weapon systems <sup>g</sup>	363,051	22.3
<b>Total</b>	<b>1,244,631</b>	<b>\$83.8</b>

<sup>a</sup> Includes military active duty and reserve personnel and DOD civilian employees.

<sup>b</sup> Includes costs for both DOD and contractor operations.

<sup>c</sup> Includes maintenance that is not part of the defense working capital fund (such as ordnance depots and ship maintenance activities not in a depot).

<sup>d</sup> Refers to unit level related functions.

<sup>e</sup> Includes funding and personnel attributable to operational logistics but not categorized exclusively into maintenance, supply, or transportation.

<sup>f</sup> Includes miscellaneous product support not categorized exclusively as maintenance, supply, or transportation (such as logistics administrative support).

<sup>g</sup> Consists of strategic transportation, clothing, subsistence, and medical supplies not directly related to a specific weapon system.

Source: Logistics Management Institute estimate prepared for DOD.

DOD has completed a number of studies on ways to improve its support processes. Generally, these studies have focused on increasing reliance on the private sector to meet the Department's logistical support needs and making greater use of improved technologies, new business processes, and commercial transportation.

#### PROGRESS MADE, BUT UNCERTAINTIES REMAIN ABOUT PLANS, SCHEDULES, AND THE SUFFICIENCY OF TEST DATA

DOD has taken some steps to reengineer its logistics support activities. For example, it has outlined key principles and concepts that it wants to test for broader application in logistics restructuring. However, it has not developed an overall plan to link its broad reengineering goals to the approximately 400 individual service initiatives that are already under way to improve the logistics support system. Additionally, the Department's reengineering schedule appears overly optimistic, and some pilot programs may not provide meaningful tests of reengineering concepts.

Two key documents set forth the general principles of DOD's reengineering process. The first is the August 1999 *Logistics Strategic Plan*, which outlines the characteristics of the new logistics concept and sets 2005 as the timeframe for implementation. The second is DOD's April 1998 *Report to Congress on Actions to Accelerate Movement to*

*the New Workforce Vision*, which provides a broad overview of planned reengineering efforts and discusses five fundamental reengineering concepts:

- Reengineering product support (logistics support focused on a weapon system or its support system) by adopting best practices used by private industry.
- Competitively sourcing product support by using competition or business case analysis to select a source for long-term, total life-cycle<sup>2</sup> support.
- Modernizing systems by replacing outmoded components with new components that have increased reliability, maintainability, or supportability.
- Expanding the use of prime vendors and virtual prime vendors through long-term partnerships with private sector providers to support weapon systems using techniques such as on-demand manufacturing.
- Establishing weapon system program manager oversight of life-cycle support by expanding the program manager's role.

The first four concepts were more fully addressed in a July 1999 DOD report, *Product Support for the 21st Century*, and the fifth by the October 1999 report *Program Manager Oversight of Life-Cycle Support*. Based on the two reports, DOD established 30 pilot programs (10 in each service) that will be used to test the five concepts.

Although the services have been directed to develop a plan that links their initiatives to DOD's overall vision, it remains unclear whether, when, or how these individual service plans will be integrated. A March 23, 2000 directive required the military services to establish logistics reengineering plans by July 1, 2000. The directive requires that the plans relate the 400 different service-sponsored logistics reengineering initiatives to the *Logistics Strategic Plan* objectives. While there is no requirement to develop an overall DOD plan that integrates the service plans, DOD officials said that the integration will be accomplished through the Department's planned new logistics architecture, which is supposed to provide a blueprint that will guide and control the development and maintenance of the many related logistics systems. Development of this logistics architecture is a key goal of a new office established within the Office of the Secretary of Defense to coordinate the implementation of the reengineering effort.

Uncertainties also exist about the overly optimistic implementation schedule that has been established for DOD's reengineering program. For example, the Department plans to use 30 pilot programs to generate information to develop future models for reengineering and policy changes, and to fully implement reengineered support strategies DOD-wide by the end of 2005. However, some pilot program test plans have not been fully developed, test objectives for others have not been clearly defined or may subsequently change, and test results of some pilots may be delayed. Additionally, other challenges that must be overcome include questions about the transfer of government parts inventories to the private sector and the availability of sufficient funding to fully implement some of the pilots. As a result, key information that will be needed to assist in the reengineering process likely will not be available in time to meet decision-making deadlines. Table 2 shows the number of pilot programs in each service that we have

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<sup>2</sup> The life cycle of a system includes development, procurement, operation, support, and disposal.

determined will have problems providing information to meet the Department's reengineering schedule.

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**Table 2: Number of Pilot Programs Whose Program Plans Are Not Likely to Meet Logistics Reengineering Timelines**

Problem <sup>a</sup>	Number of pilots by service			
	Army	Air Force	Navy	Total
Test plans not yet developed	2	1	4	7
Test plans subject to change	6	7	4	17
Test results likely not available at end of fiscal year 2002	7	6	8	21

<sup>a</sup> Problems are not mutually exclusive; consequently, some pilot programs are included in more than one category.

Source: Our analysis.

Additionally, the pilots will have difficulty showing how much savings or improvements could come from a specific reengineering concept because they will have difficulty determining the causes of savings: reengineered processes or other reasons (such as investments in new hardware). For example, the Abrams tank pilot program involves both changes to the logistics support system and installation of a more reliable and fuel-efficient engine. Reengineering plans, however, do not include a methodology to determine which of the two--the engine or the changes in logistics--would be responsible for which portion of any future savings. Without the ability to make this distinction, decisions may be made to expand the use of a concept that produces little or no savings.

Finally, significant up-front investment costs are often required to implement the reform initiatives, but these costs have not been identified or budgeted. The Department has not estimated the total costs of completing the logistics reengineering initiatives or developed a supporting budget plan. Without an investment strategy, there may not be sufficient funds to adequately test the reengineering concepts being piloted and to implement the results on a Department-wide basis.

#### EFFECTS OF REENGINEERING EFFORTS ON COMBAT FORCES NOT YET KNOWN

It is too early to assess the effect of ongoing reengineering efforts on combat forces because DOD does not know how the final logistics system will be structured. Nonetheless, logistics support personnel from the Joint Chiefs of Staff and combat commands in the United States and Europe have voiced a number of concerns about the potential effects that some reengineering efforts could have on their operational capability. These include the presence of increasing numbers of contractor personnel on the battlefield, the ability of contractors to deal cost-effectively with surge requirements, the potential reduction of rotational positions to meet training or operational requirements, and the overall impact of the reengineering effort on product support costs

and funding. These issues regarding the reengineering process will need to be addressed soon, if the initiatives are to be successful:

- Contractors on or near the battlefield. The potential presence of private contractors near or on the battlefield to order and distribute supplies, maintain items, and provide technical support has created concern that combat units' ability to conduct wartime missions could be weakened if contractors are withdrawn or are unwilling to stay during hostilities. Further, providing the required support and protection to contractors on or near a battlefield may require extra personnel and may divert resources from the wartime mission, just at a time when the services are trying to reduce their logistical presence in areas close to the battlefield.
- Higher wartime requirements. Reliance on commercial supply chains to support wartime and surge requirements could be a problem, especially if more than one theater of operations is involved. Combat officials believe that temporary surges in demand may be manageable in the commercial sector, where vendors deal with demand patterns that are generally known. DOD has successfully used prime vendor arrangements for some consumable items such as food and medical supplies, which have large networks of suppliers. However, combat officials noted, military parts and systems have different characteristics than food and medical supplies. They involve limited numbers of potential suppliers and they often have demand patterns that are difficult to predict because parts are often unique and have low usage or erratic demand.
- Control of funding. Combat officials are concerned that they may lose the flexibility to prioritize funding under a reengineered logistics system that places greater responsibility and authority in the hands of weapon system program managers. Although they acknowledge that quality of support is a key goal, officials are also concerned that shifting control of operations and maintenance funding away from combat commands to program managers potentially diminishes the commander's flexibility to manage unit-funding priorities. For example, under the current process, a commander can postpone scheduled maintenance or reduce supply levels to free up funding for higher-priority requirements. Under the reengineered system, the commander might not be able to do so.

DOD officials state that a planned test using U.S. Central Command forces during operational exercise in Egypt may be useful in assessing the operational effectiveness of reengineered logistics systems. The Department is in the early phases of developing its Joint Logistics Warfighter Initiative test, but the test is scheduled to take place before the reengineering initiatives are fully implemented, and its usefulness in assessing the impact of the reengineering concepts on combat forces will therefore be very limited. Consequently, its usefulness in supporting planned decisions at the end of fiscal year 2002 to expand the use of new logistics concepts DOD-wide is questionable.

## OTHER ISSUES THAT COULD AFFECT REENGINEERING GOALS

If not addressed, several other factors would limit DOD's ability to achieve its reengineering goals. These include (1) the impact on savings from not centrally managing parts, (2) the impact that the likely use of sole-source, long-term contracts would have on anticipated savings, (3) and the effects of existing laws and policies on the implementation of reengineering initiatives.

### Impact on Savings from Not Centrally Managing Parts

DOD has not examined whether reengineering efforts may reduce some of the savings currently obtained from centrally managing items that are used by more than one system. In a March 1999 letter to the Deputy Undersecretary of Defense (Logistics), military service and Defense agency commanders indicated that they could consolidate orders for common items used by different weapon systems, thus decreasing the number of parts to be stocked and benefiting from economies of scale. Service logistics officials further expressed concern that if program managers were to make logistics support decisions on a system-by-system basis, fewer common items would emerge, just at a time when DOD is trying to increase the commonality of its subsystems and parts.

### Impact of Sole-source, Long-term Contracts on Reengineering Savings

Competitive sourcing is another way DOD has been trying to maximize savings. Our previous work in this area has indicated that competition has reduced costs, regardless of whether a public entity or private company wins a contract. In some cases, however, reengineering efforts plan to use sole-source, long-term contracts. Developing strategies for controlling cost growth in these cases will be a key issue because, as we have previously reported, it is difficult to control cost growth in a sole-source environment.<sup>3</sup> Program managers plan to compare cost and performance of potential government and private-sector providers to determine whether to award initial long-term, sole-source contracts within the pilot programs. But relatively few of them envision competition among multiple private-sector firms, primarily because of a lack of qualified firms.

### Impact of Laws and Policies on DOD's Logistics Reengineering Initiatives

DOD's efforts to implement product support reengineering concepts must take into account existing statutory and policy constraints. Service and DOD officials identified some major statutory provisions and policies that could impact reengineering efforts.

- 10 U.S.C. 2464 provides for a "core" logistics capability that is to be identified by the Secretary of Defense and maintained by DOD. Section 2464 generally requires DOD to maintain this capability within a government-owned and operated facility. This provision can limit the ability of the services to contract with the private sector for the performance of logistics work.

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<sup>3</sup> Defense Depot Maintenance: Contracting Approaches Should Address Workload Characteristics  
(GAO/NSIAD-98-130, June 15, 1998).

- 10 U.S.C. 2466 prohibits the use of more than 50 percent of funds made available in a fiscal year for depot-level maintenance and repair for private sector performance. This provision can limit the amount of depot-level maintenance and repair work that can be performed by private-sector contractors.
- 10 U.S.C. 2469 requires a competition between public and private-sector entities before certain depot maintenance and repair workloads can be changed from government performance to performance by a contractor. This provision limits the ability of the services to transfer depot-level maintenance and repair work to the private sector by requiring a public-private competition before moving the work. The competitions, while beneficial, can be time consuming and complex and can require considerable resources.
- Office of Management and Budget Circular A-76, which describes the executive branch's policy for the performance of commercial activities, and which may apply to logistics activities not covered under 10 U.S.C 2469, requires a comparison of government and private-sector alternatives to identify the most cost-effective alternative. The competitive sourcing cost studies required by A-76, like those required under section 2469, while beneficial, can be time consuming and complex and can require considerable resources.

Our understanding is that the Department began developing a legislative package during 1999 to seek relief from legislative constraints facing its reengineering efforts. However, the proposals were not finalized. Instead, Department officials decided to work within the existing legal and appropriations framework to define more precisely the effect of the constraints and better document the need for legislative changes. However, as this Subcommittee is aware, one of the real challenges some the services face as they seek to increase their reliance on private-sector support is staying within the 50-percent ceiling on contract depot maintenance support established under 10 U.S.C. 2466. For example, we have recently reported on challenges faced by the Air Force this year and in the longer term to operate within that ceiling.<sup>4</sup>

### RECOMMENDATIONS

Finally, our recent report included the following actions that we believe are needed to enhance the Department's reengineering efforts.

- To build on and expand DOD's efforts to reengineer its logistics system, we recommend that the Secretary of Defense direct the Under Secretary of Defense for Acquisition and Logistics to develop an overarching plan that integrates the individual military service and defense agency logistics reengineering plans. Among other things, the plan should include an investment strategy for funding the reengineering

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<sup>4</sup> Defense Logistics: Air Force Report on Contractor Support Is Narrowly Focused (GAO/NSIAD-00-115, Apr. 20, 2000).

initiatives and details for how DOD plans to achieve its final logistics system end state.

- To improve the implementation of DOD's logistics reengineering, we recommend that the Secretary of Defense (1) reassess the Department's schedule for testing, evaluating, and implementing pilot program logistics reengineering initiatives, (2) establish a methodology showing how much savings or improvements come from reengineering concept tests, and (3) reassess the Department's approach for addressing the combat command concerns dealing with the presence of increasing numbers of contractor personnel on the battlefield, the ability of contractors to meet surge requirements, the potential reduction of rotational slots to meet training requirements, and the overall impact on product support costs and funding before proceeding with implementation of product support reengineering.

The Department generally agreed with our report and its recommendations.

Mr. Chairman, this concludes our formal statement. If you or other members of the Subcommittee have any questions, we will be pleased to answer them.

#### Contacts and Acknowledgements

For future questions regarding this testimony, please contact David Warren or Julia Denman at (202) 512-4290. Other individuals making key contributions to this testimony included John Strong, Larry Junek, Glenn Knoepfle, and John Brosnan.

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